WATER QUALITY MITIGATION PROJECTS

ELWHA SURFACE WATER INTAKE (ESWI)

Elwha Surface Water Intake

Water Quality Mitigation Projects - **Elwha Surface Water Intake**
Text for inclusion in the Elwha River Restoration Project JARPA
All bold text is copied from the JARPA application. All responses are in normal text.

SECTION 2

4. NAME, ADDRESS, AND PHONE NUMBER OF PROPERTY OWNER(S), IF OTHER THAN APPLICANT.
City of Port Angeles, 321 E. Fifth St., Port Angeles, WA 98362

5. LOCATION (STREET ADDRESS, INCLUDING CITY, COUNTY AND ZIP CODE, WHERE PROPOSED ACTIVITY EXISTS OR WILL OCCUR)
The surface water diversion and fish screen facilities are located in the immediate vicinity of the existing Port Angeles Municipal and Industrial Diversion on property owned by several individuals or entities. All of the features are in the vicinity of the Washington Department of Fish and Wildlife fish hatchery, near Port Angeles, Clallam County, Washington

LOCAL GOVERNMENT WITH JURISDICTION (CITY OR COUNTY)
Clallam County, Washington

WATERBODY
Elwha River

TRIBUTARY OF
N/A

WRIA#
18

¼ SECTION
NE1/4

SECTION
10

TOWNSHIP
30N

RANGE
7W

SHORELINE DESIGNATION
Conservancy

TAX PARCEL NUMBER
See Ownership List

ZONING DESIGNATION
RCC5

DNR STREAM TYPE, IF KNOWN
F

Elwha Surface Water Intake

6. DESCRIBE THE CURRENT USE OF THE PROPERTY, AND THE STRUCTURES EXISTING ON THE PROPERTY. IF ANY PORTION OF THE PROPOSED ACTIVITY IS ALREADY COMPLETED ON THIS PROPERTY, INDICATE THE MONTH AND YEAR OF COMPLETION.

The site is currently occupied by the City of Port Angeles surface water diversion facilities, which consist of the following:

- Upstream features: Rock diversion dam, concrete intake structure, and a concrete lined horseshoe tunnel.
- Downstream features: Concrete distribution structure containing several gates, an overflow weir, a wet well and control valve; a pipeline that connects to the existing concrete intake structure for the WDFW Rearing Channel; and an overflow channel that passes excess water to the Elwha River.

The new diversion facilities will replace the existing facilities except for the tunnel and overflow channel. To date, none of the new facilities have been completed.

IS THIS PROPERTY ON AGRICULTURAL LAND?
No

ARE YOU A USDA PROGRAM PARTICIPANT?
No

7.a. DESCRIBE THE PROPOSED CONSTRUCTION AND/OR FILL WORK FOR THE PROJECT THAT YOU WANT TO BUILD THAT NEEDS AQUATIC PERMITS: COMPLETE PLANS AND SPECIFICATIONS SHOULD BE PROVIDED FOR ALL WORK WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE, INCLUDING TYPES OF EQUIPMENT TO BE USED. IF APPLYING FOR A SHORELINE PERMIT, DESCRIBE ALL WORK WITHIN AND BEYOND 200 FEET OF THE ORDINARY HIGH WATER MARK. ATTACH A SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED.

The Elwha Surface Water Intake (ESWI) Project requires replacement of existing diversion facilities and installation of fish passage and fish screen structures to satisfy current fish passage criteria. Construction activities will consist of the following:

- Construction of a temporary diversion channel, control weir, constructed riffle, intake structure, and access road, within the limits of the Elwha River and left bank flood plain. The constructed riffle will be constructed to a grade and appearance that approximates existing riffles in the Elwha River.
- Construction of a temporary diversion pump station to maintain existing diversion flows while the new diversion facilities are being constructed. The diversion pump station will consist of a new retaining wall supporting fish screens and the fish return pipe. These structures will be constructed within the limits of the Elwha River downstream from the existing one lane bridge. Intake pipes will extend from the retaining wall to the pump station. The pump station will be located on the waterside of the new federal levee.
- Construction of a new fish screen structure at the downstream end of the existing tunnel. Screened flow will pass into the Influent pump station for the Elwha Water Treatment Plant, or bypassed to the users. This structure is located on the landward side of the new federal levee.
- Construction of a new distribution vault structure. Pumped flow from the diversion pump station, and bypass flows from the fish screen structure will pass through the distribution vault structure. This facility is also located on the landward side of the new federal levee.
- Removal of the existing rock diversion dam, intake structure, distribution structure and pipeline that connects to the existing WDFW Rearing Channel intake structure.

Elwha Surface Water Intake

Construction within the limits of the OHWM will include the following:

- Excavating the temporary diversion channel in the left flood plain
- Excavating for the new intake structure and pipelines along the right bank
- Placement and removal of cofferdams across the Elwha River
- Placement of sheet pile walls for the new control weir and access road
- Placement of the reinforced concrete intake structure and guide wall
- Installation of two pipelines for sediment bypass and diversion flow
- Placement of backfill and riprap for the constructed riffle.

Track mounted hydraulic excavators, track front end loaders, large articulated wheel loaders, and compactors will be used to excavate and place materials. Off road haulers will be used to move excavated material on site, and large trucks will be used to import riprap from local quarries. Concrete delivery trucks and concrete pump trucks will be on site during concrete placements.

The cofferdams will be constructed to eliminate the need to perform work in the water except during the final stages of placing the constructed riffle at the downstream end, and during the removal of the cofferdams. All the work for installing the new diversion facilities upstream from the existing tunnel, and the retaining wall and fish screens for the diversion pump station will require an aquatic permit. Re-vegetation in the upstream work is not planned, since all areas within the disturbance boundaries will experience flow continually or seasonally. Vegetation in the higher elevations of the channel and flood plain will reestablish naturally over the long term when flow conditions allow.

7.b. DESCRIBE THE PURPOSE OF THE PROPOSED WORK AND WHY YOU WANT OR NEED TO PERFORM IT AT THE SITE. PLEASE EXPLAIN ANY SPECIFIC NEEDS THAT HAVE INFLUENCED THE DESIGN.

The purpose of the proposed Elwha Surface Water Intake is to provide a new diversion facility that will meet diversion flow requirements and satisfy fish passage and fish screen criteria. The control weir is necessary to provide sufficient head at the intake structure for distributing flows to the users by gravity. The constructed riffle provides the transition from the height of the control weir to the existing streambed at a slope that naturally occurs along existing segments of the Elwha River. The temporary diversion channel is necessary for bypassing Elwha River flows around the construction site and along the general rout that current over bank flows follow. The locations of the features are based on observed performance during a physical hydraulic model study. The river features of the new diversion system need to accommodate passage of large volumes of sediment that will be released when the two upstream dams (Elwha and Glines Canyon Dams) are removed.

The existing facilities do not satisfy current fish passage criteria, and will not be able to accommodate the large volumes of sediment that are expected during dam removal.

7.c. DESCRIBE THE POTENTIAL IMPACTS TO THE CHARACTERISTIC USES OF THE WATER BODY. THESE USES MAY INCLUDE FISH OR AQUATIC LIFE, WATER QUALITY, WATER SUPPLY, RECREATION AND AESTHETICS. IDENTIFY PROPOSED ACTIONS TO AVOID, MINIMIZE, OR MITIGATE DETRIMENTAL IMPACTS, AND PROVIDE PROPER PROTECTION OF FISH AND AQUATIC LIFE. ATTACH A SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED.

Short-term Impacts due to Construction Include:

- Temporary increase in suspended sediments and turbidity potentially affecting fish and aquatic life and water quality.
- Localized modification of river hydrology potentially affecting fish and aquatic life.

Elwha Surface Water Intake

- Removal of riparian vegetation potentially affecting aquatic life and the aesthetic character of the riparian area.

Long-term Impacts Include:
- Alteration of the character of the streambed and the river hydrology affecting fish and aquatic life.
- Potential increase in fish populations in the watershed by improving fish passage characteristics of this section of the Elwha River.

Mitigation Measures during Construction Include:
- Minimizing the impacts to existing, healthy vegetation to the extent possible.
- Use of proactive and reactive BMP's at the site.
- Use of cofferdams to isolate the construction area from the river.
- Work in the river during low flow.
- All cleared timber of suitable size will be made available for constructed log jams to create fish habitat. Other cleared vegetation will be disposed at an approved upland location.

Mitigation Measured for Long-Term Impacts Include:
- Place riprap for riverbed and bank slope protection.
    - Strategically place boulders along the constructed riffle and low flow channel to provide diversity and resting areas for fish.

8. WILL THE PROJECT BE CONSTRUCTED IN STAGES?
Yes, the Elwha Surface Water Intake, Elwha Water Treatment Plant, and Crown Z Road Improvement Projects will be constructed separately from other elements of the project.

PROPOSED STARTING DATE:
ESWI construction will occur beginning in late 2006. The exact starting date will be determined based on issuance of the necessary permits and completion of the design.

ESTIMATED DURATION OF ACTIVITY:
Overall ESWI construction will require approximately 36 months.

9. CHECK IF ANY STRUCTURES WILL BE PLACED:

WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE FOR FRESH OR TIDAL WATERS.
The diversion channel, control weir and constructed riffle, intake structure, access road, and the river intake retaining wall will be located within the limits of the ordinary high water level.

WATERWARD OF MEAN HIGH WATER LINE IN TIDAL WATERS:
No.

10. WILL FILL MATERIAL (ROCK, FILL, BULKHEAD, OR OTHER MATERIAL) BE PLACED:

WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE FOR FRESH OR TIDAL WATERS.
Yes. Compacted backfill, riprap and bedding will be placed to develop the lines and grades shown on the Drawings, and to provide protection from erosion in the long term.

WATERWARD OF MEAN HIGH WATER LINE IN TIDAL WATERS.
No.

Elwha Surface Water Intake

11. WILL MATERIAL BE PLACED IN WETLANDS?
Yes. Wetlands J (existing island) and I will be reconfigured to the lines and grades shown on the drawings. The south end of wetlands area O will be modified when the cofferdam is placed in the river for removing the existing rock jetty and construction of the new river intake retaining wall. The existing overflow channel A will be restored to near existing grade where it connects to the Elwha River. The north end of this wetland will not be altered. The east end of wetland E will be modified with construction of the new overflow channel coming from the new fish screen structure. The west end of this channel will be affected by construction of the new flood levee.

IF YES,

A. IMPACTED AREA IN ACRES:
Wetland E: >0.01 Acres
Wetland I: 0.11 Acres
Wetland J: 1.01 Acres
Wetland O: 0.032

B. HAS A DELINEATION BEEN COMPLETED? IF YES, PLEASE SUBMIT WITH APPLICATION.
Yes

C. HAS A WETLAND REPORT BEEN PREPARED? IF YES, PLEASE SUBMIT WITH APPLICATION.
Yes

D. TYPE AND COMPOSITION OF FILL MATERIAL (E.G. SAND, ETC):
Excavation from the existing riverbed and flood plain will be used as backfill. Structural backfill will consist of sand and gravel. Riprap will be placed over the top of compacted backfill to provide erosion protection.

E. MATERIAL SOURCE:
The majority of the backfill material will come from excavations for temporary diversion channel, intake structure, and pipelines. Riprap and bedding will come from processing some of the larger excavated materials on site, and from local quarries.

G. WILL PROPOSED ACTIVITY CAUSE FLOODING OR DRAINING OF WETLANDS?
Yes, construction of the constructed riffle and diversion channel will result in removing the existing island (Wetlands area J) and wetlands area I, which is a small area along the left bank of the existing river.

13. WILL EXCAVATION OR DREDGING BE REQUIRED IN WATER OR WETLANDS?
Upstream and downstream cofferdams will be installed so that construction of the temporary diversion channel, control weir and constructed riffle, intake structure, access road, and the river intake retaining wall and fish screens can be excavated in the dry. Placement and removal of the cofferdams will be performed in the Elwha River. In addition, the final stages of grading the downstream end of the constructed riffle may be done in the water.

A. VOLUME: Approximately 5,700 cubic yards will be excavated from the existing island wetland area.
AREA: The entire island (1.07 acres) is within the ordinary high water for the main channel.

B. COMPOSITION OF MATERIAL TO BE REMOVED:
River alluvium and minimal amounts of topsoil.

Elwha Surface Water Intake

C. DISPOSAL SITE FOR EXCAVATED MATERIAL:

River alluvium will be used for backfill in connection with the ESWI construction. If excess material exits, it will be disposed of at approved upland sites. Topsoil will be used on slopes of levee and entrance channel to support revegetation.

D. METHOD OF DREDGING

Hydraulic excavation or similar conventional earthmoving equipment.

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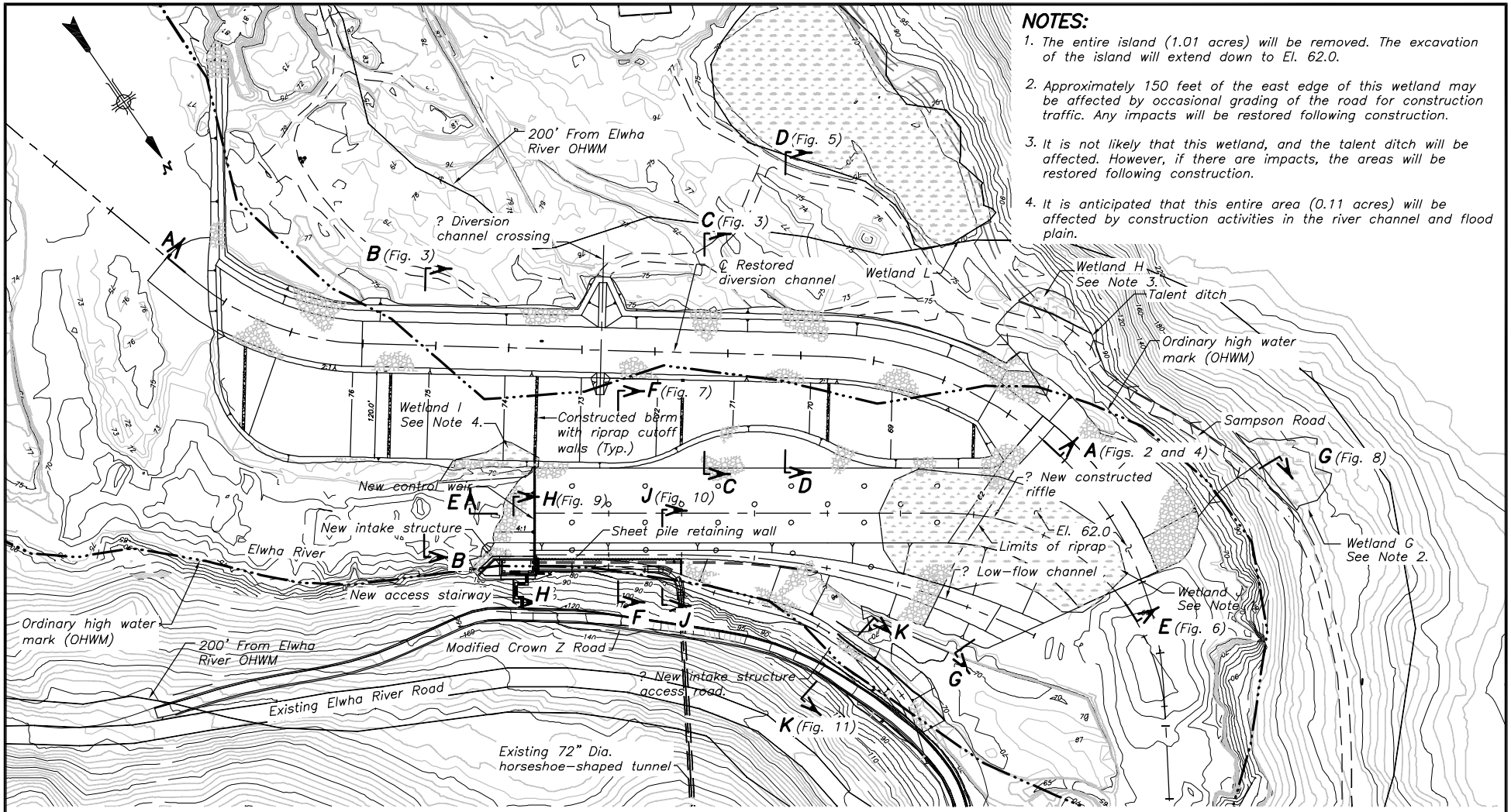

Purpose: River Diversion	ELWHA RIVER RESTORATION PROJECT	Proposed: Surface Water Intake Construction
Adjoining Property Owners: See JARPA Application	Elwha Surface Water Intake	Reference: 200600334
	Modified Site Plan Upstream Features	Near: Port Angeles, WA
		Application by: National Park Service
		Figure 1 of 18
		Date: 3/31/2006

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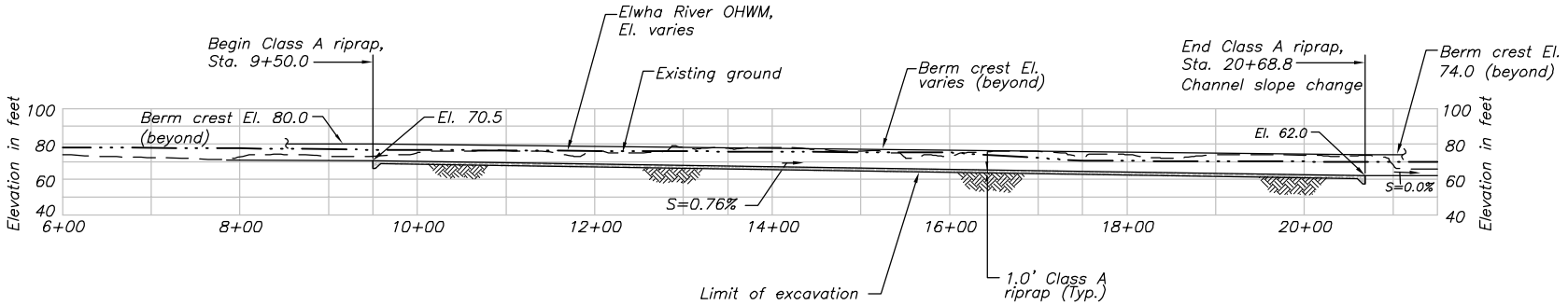


SECTION A–A (Fig. 1)

(See Note 1)

Volume of Material		
Structure	Material	Quantity
Temporary Diversion Channel	Excavation	32,860 cy.
	Backfill	4,370 cy.
	Riprap	5,275 cy.

Volume of Material		
Structure	Material	Quantity
Upstream Cofferdam	Excavation	16 cy.
	Backfill	1,700 cy.
Downstream Cofferdam	Excavation	130 cy.
	Backfill	605 cy.

200 0 200 400 600

HORIZONTAL SCALE OF FEET

NOTES:

1. This section is a profile along the temporary diversion channel that will be in use during construction.

Purpose: River Diversion

Adjoining Property Owners:
See JARPA Application

ELWHA RIVER RESTORATION PROJECT

Elwha Surface Water Intake

Temporary Diversion Channel
Section A

Proposed: Surface Water Intake Construction

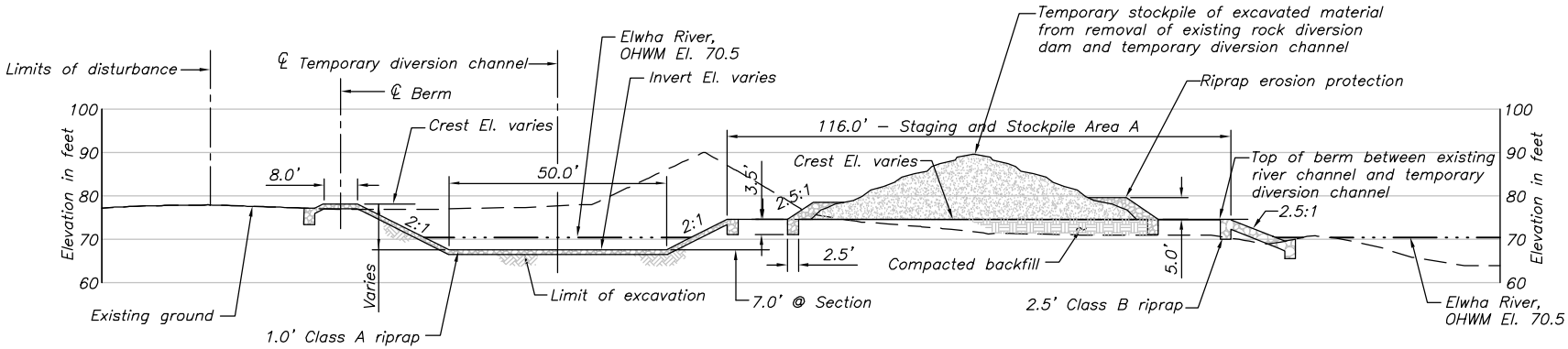
Reference: 200600334

Near: Port Angeles, WA

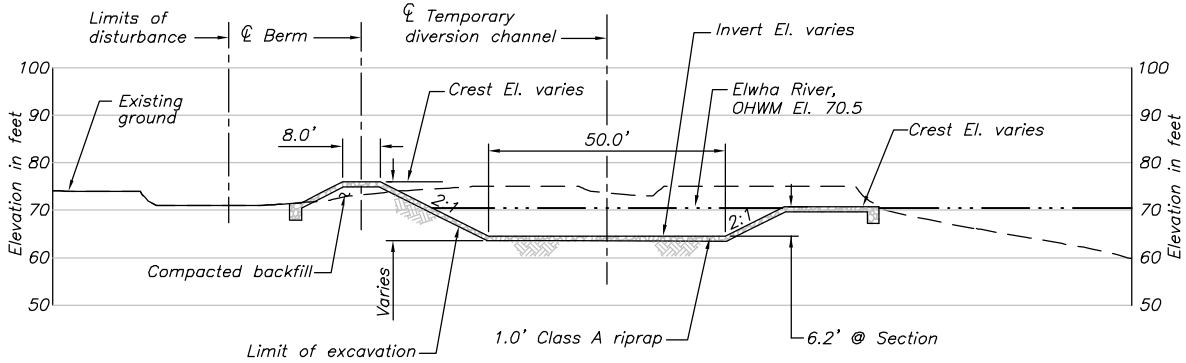
Application by: National Park Service

Figure 2 of 18

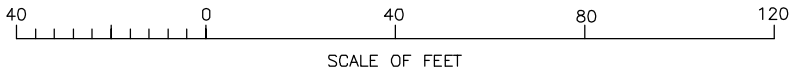
Date: 3/31/2006



SECTION B–B *(Fig. 1)*



SECTION C–C *(Fig. 1)*



NOTES:

1. *See Figure 2 of 18 for Temporary Diversion Channel quantities.*

Purpose: River Diversion *Adjoining Property Owners:* *See JARPA Application*	*ELWHA RIVER RESTORATION PROJECT* *Elwha Surface Water Intake* *Temporary Diversion Channel* *Sections B and C*	*Proposed: Surface Water Intake Construction* *Reference: 200600334* *Near: Port Angeles, WA* *Application by: National Park Service* *Figure 3 of 18* *Date: 3/31/2006*

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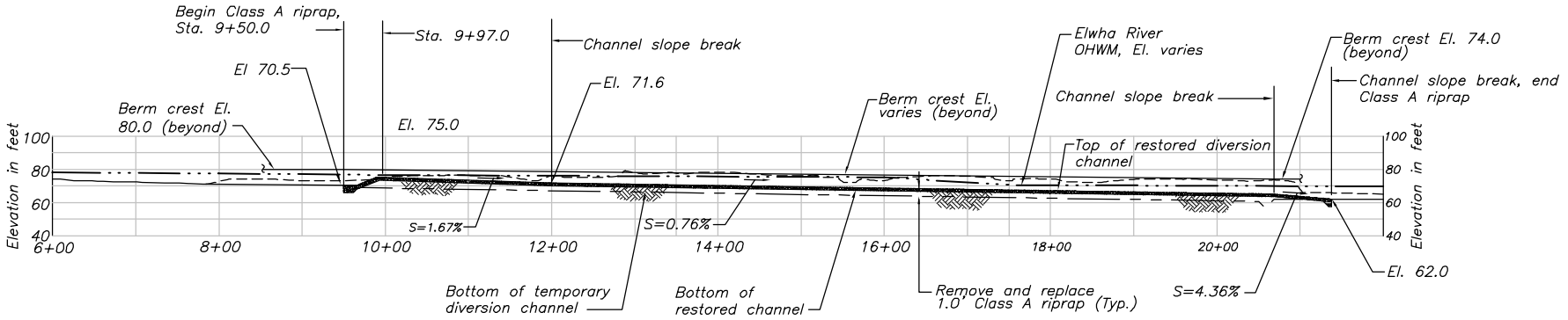

SECTION A–A (Fig. 1)

(See Note 1)

Volume of Material		
Structure	Material	Quantity
Restored Diversion Channel	Backfill	16,160 cy.
	Riprap*	5,275 cy.

*Riprap is removed from the Temporary Diversion Channel and replaced over the compacted backfill in the Restored Diversion Channel.

200 0 200 400 600

SCALE OF FEET

NOTES:

1. This section is a profile along the restored diversion channel.

Purpose: River Diversion

Adjoining Property Owners:
See JARPA Application

ELWHA RIVER RESTORATION PROJECT

Elwha Surface Water Intake

Restored Diversion Channel
Section A

Proposed: Surface Water Intake Construction

Reference: 200600334

Near: Port Angeles, WA

Application by: National Park Service

Figure 4 of 18

Date: 3/31/2006

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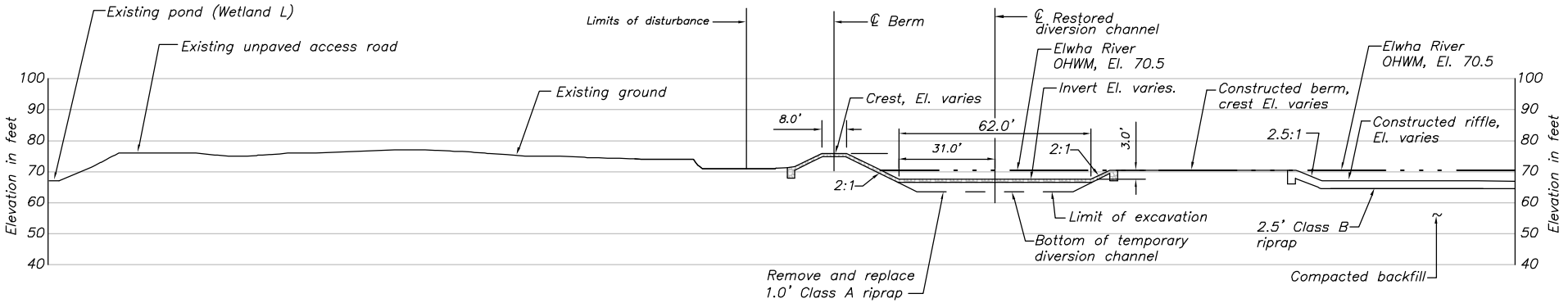
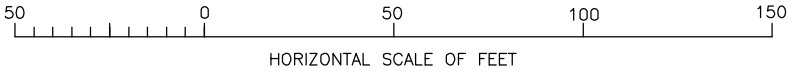


SECTION D–D *(Fig. 1)*



NOTES:

1. *See Figure 4 of 18 for Restored Diversion Channel quantities.*

Purpose: River Diversion *Adjoining Property Owners:* *See JARPA Application*	*ELWHA RIVER RESTORATION PROJECT* *Elwha Surface Water Intake* *Restored Diversion Channel* *Section D*	*Proposed: Surface Water Intake Construction* *Reference: 200600334* *Near: Port Angeles, WA* *Application by: National Park Service* *Figure 5 of 18*

Date: 3/31/2006

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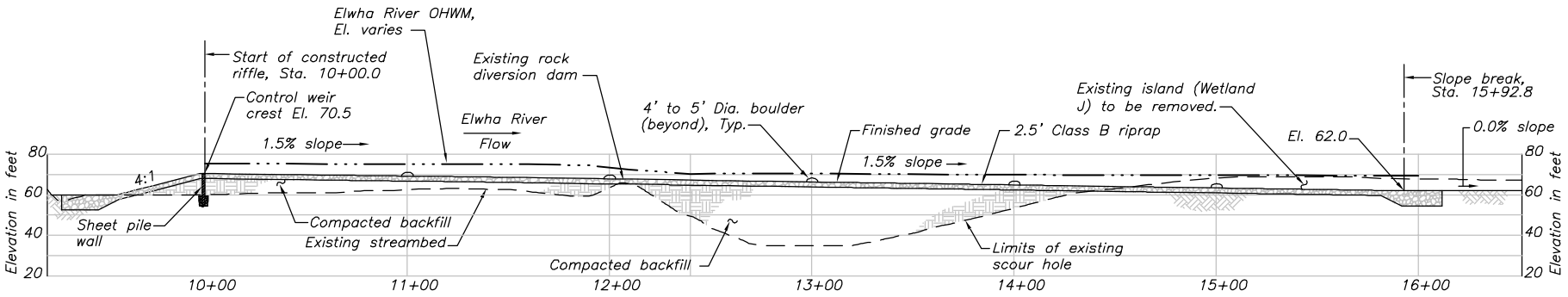
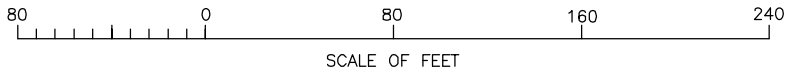


SECTION E–E (Fig. 1)

Volume of Material		
Structure	Material	Quantity
Constructed Riffle	Excavation	6,165 cy.
	Backfill	32,740 cy.
	Riprap	12,250 cy.



Purpose:

River Diversion
Adjoining Property Owners:
See JARPA Application

ELWHA RIVER RESTORATION PROJECT

Elwha Surface Water Intake

Constructed Riffle
Profile E

Proposed: Surface Water Intake Construction

Reference: 200600334

Near: Port Angeles, WA

Application by: National Park Service

Figure 6 of 18

Date: 3/31/2006

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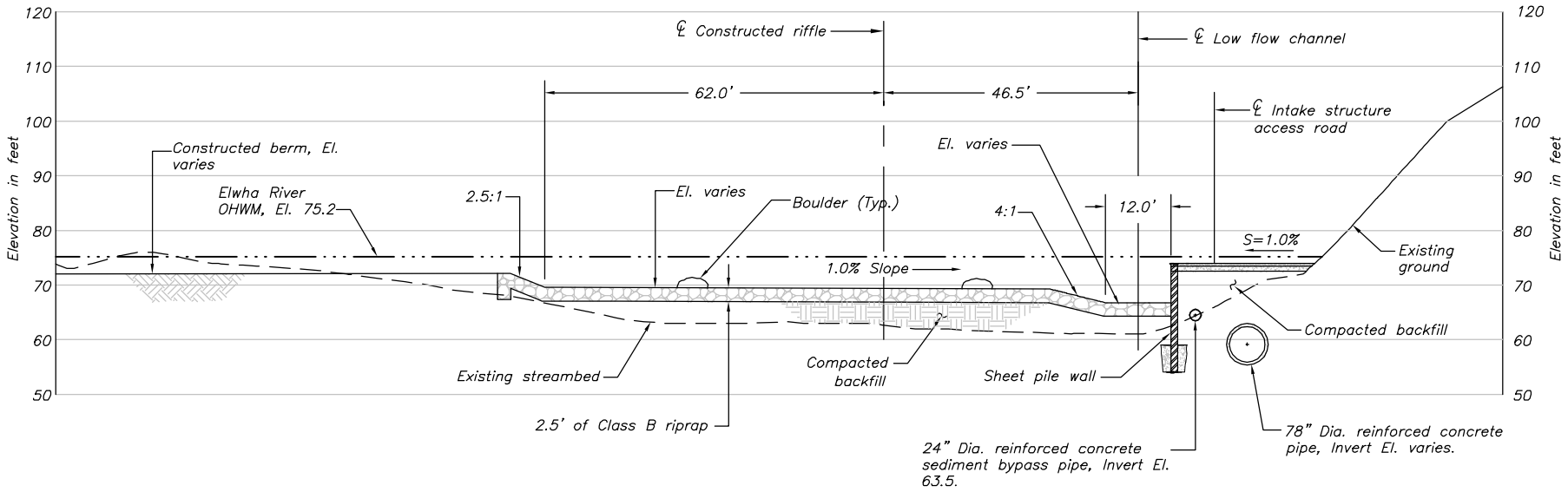
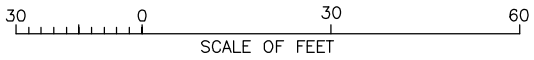


SECTION F–F (Fig. 1)



NOTES:

1. See Figure 6 of 18 for Constructed Riffle quantities.

Purpose: River Diversion Adjoining Property Owners: See JARPA Application	ELWHA RIVER RESTORATION PROJECT Elwha Surface Water Intake Constructed Riffle Section F	Proposed: Surface Water Intake Construction Reference: 200600334 Near: Port Angeles, WA Application by: National Park Service Figure 7 of 18 Date: 3/31/2006

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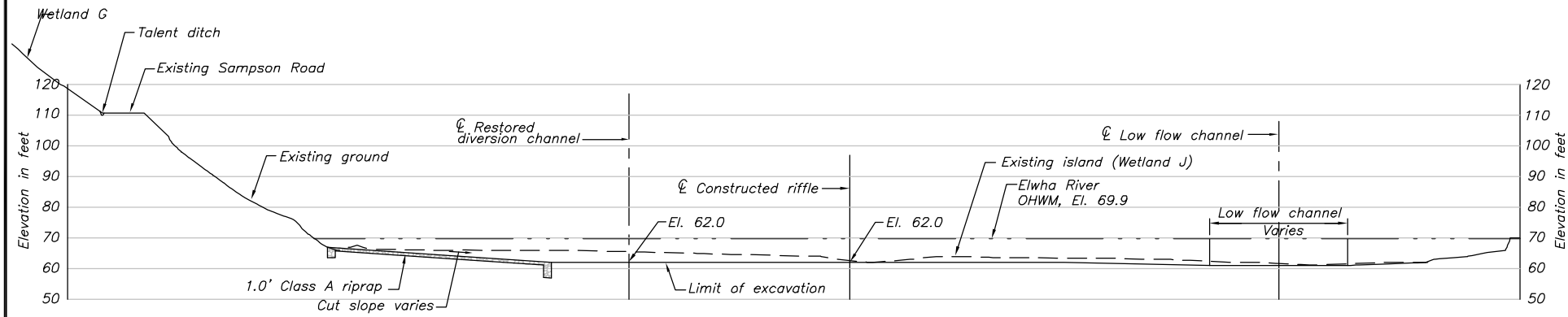
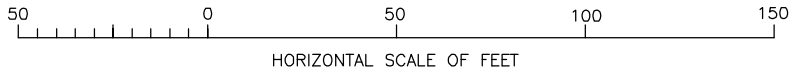


SECTION G–G (Fig. 1)



NOTES:

1. Excavation and riprap quantities for the Channel Confluence are included in the Temporary and Restored Diversion Channel. See Figures 2 and 4 of 18.

Purpose: River Diversion Adjoining Property Owners: See JARPA Application	ELWHA RIVER RESTORATION PROJECT Elwha Surface Water Intake Confluence of Channels Section G	Proposed: Surface Water Intake Construction Reference: 200600334 Near: Port Angeles, WA Application by: National Park Service Figure 8 of 18 Date: 3/31/2006

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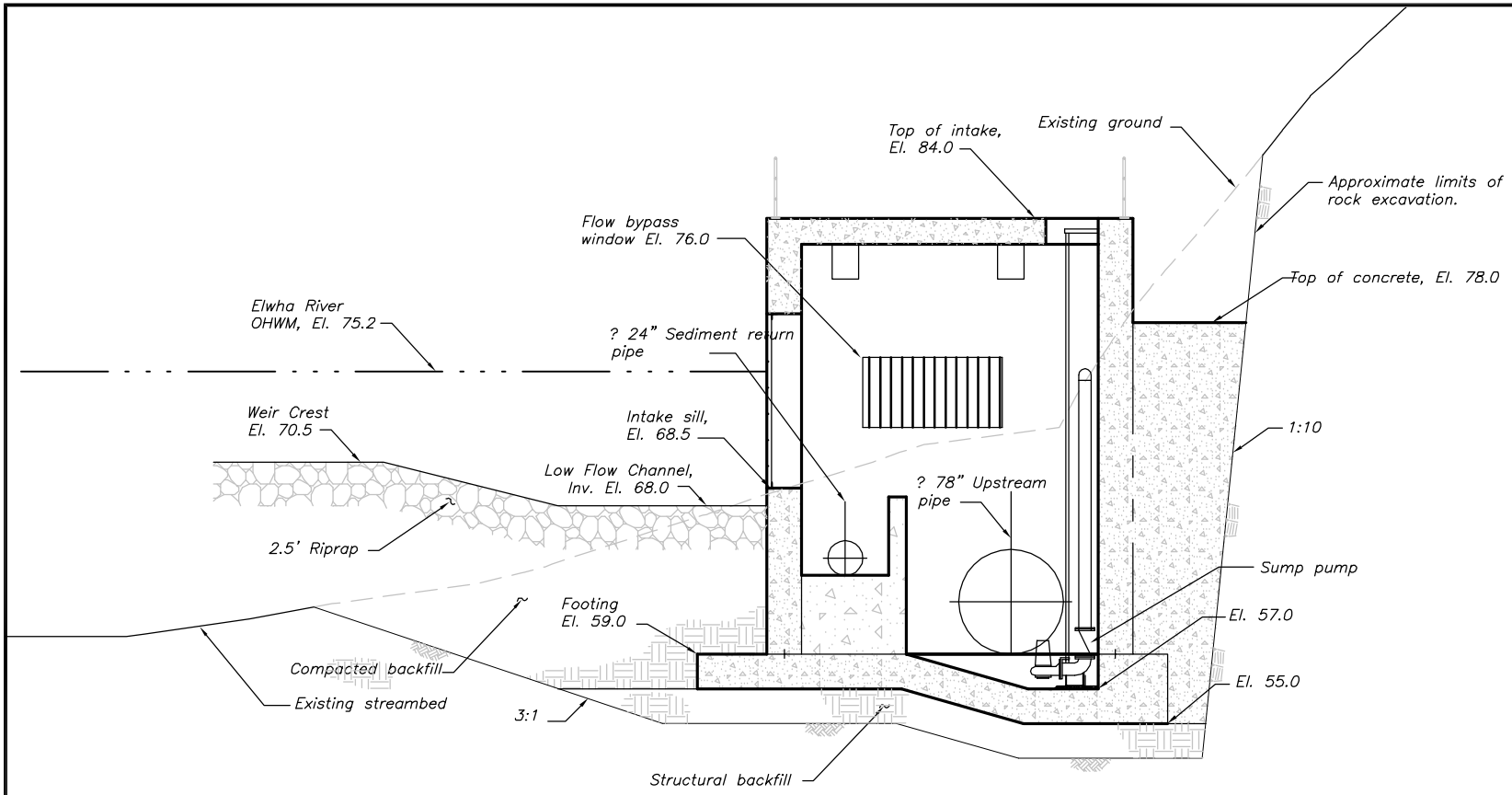

SECTION H–H (Fig. 1)

Volume of Material		
Structure	Material	Quantity
Intake Structure	Excavation	2,000 cy.
	Backfill	235 cy.
	Riprap	65 cy.

10 0 10 20 30

SCALE OF FEET

Purpose: River Diversion

Adjoining Property Owners:
See JARPA Application

ELWHA RIVER RESTORATION PROJECT

Elwha Surface Water Intake

Intake Structure
Section H

Proposed: Surface Water Intake Construction

Reference: 200600334

Near: Port Angeles, WA

Application by: National Park Service

Figure 9 of 18

Date: 3/31/2006

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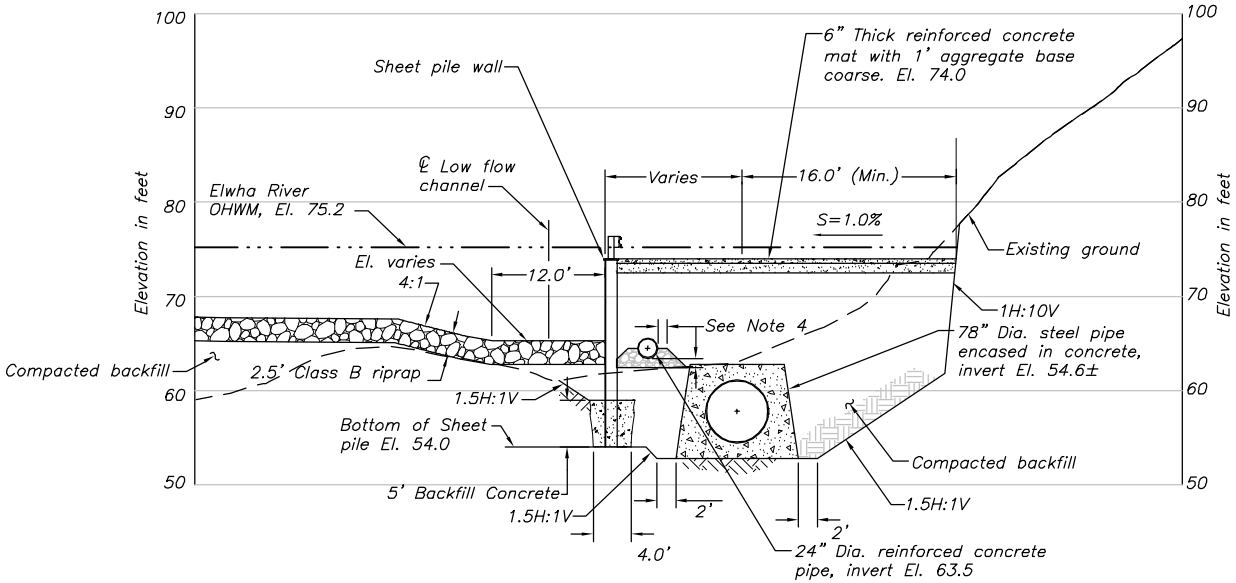
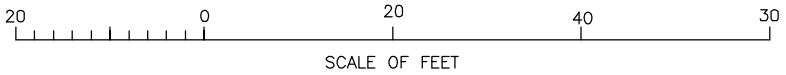


SECTION J–J *(Fig. 1)*

Volume of Material		
Structure	Material	Quantity
Access Road	Excavation	10 cy.
	Backfill	2,600 cy.



Purpose: River Diversion

Adjoining Property Owners:
See JARPA Application

ELWHA RIVER RESTORATION PROJECT

Elwha Surface Water Intake

Access Road
Section J

Proposed: Surface Water Intake Construction

Reference: 200600334

Near: Port Angeles, WA

Application by: National Park Service

Figure 10 of 18

Date: 3/31/2006

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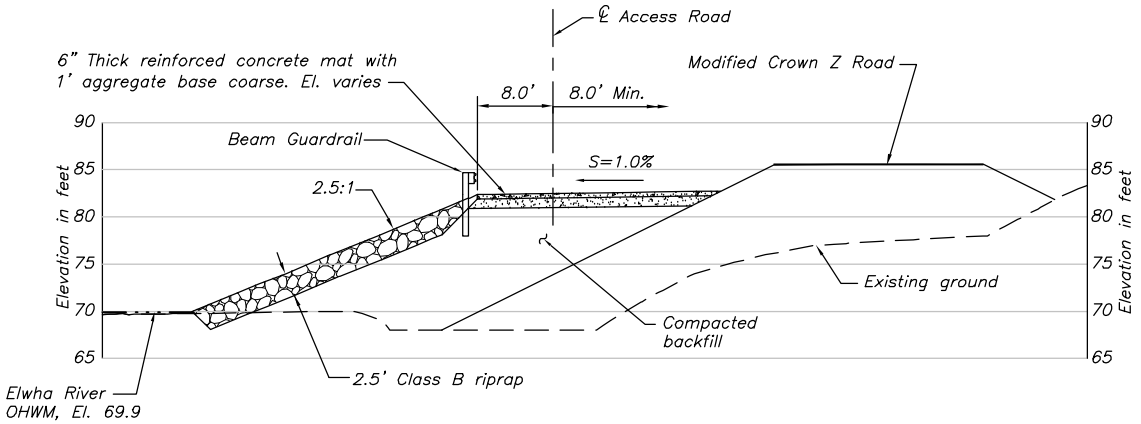
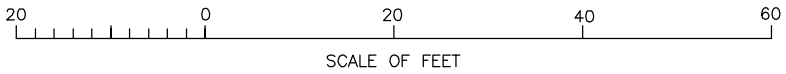


SECTION K–K *(Fig. 1)*



Purpose: River Diversion *Adjoining Property Owners:* *See JARPA Application*	*ELWHA RIVER RESTORATION PROJECT* *Elwha Surface Water Intake* *Access Road* *Section K*	*Proposed: Surface Water Intake Construction* *Reference: 200600334* *Near: Port Angeles, WA* *Application by: National Park Service* *Figure 11 of 18* *Date: 3/31/2006*

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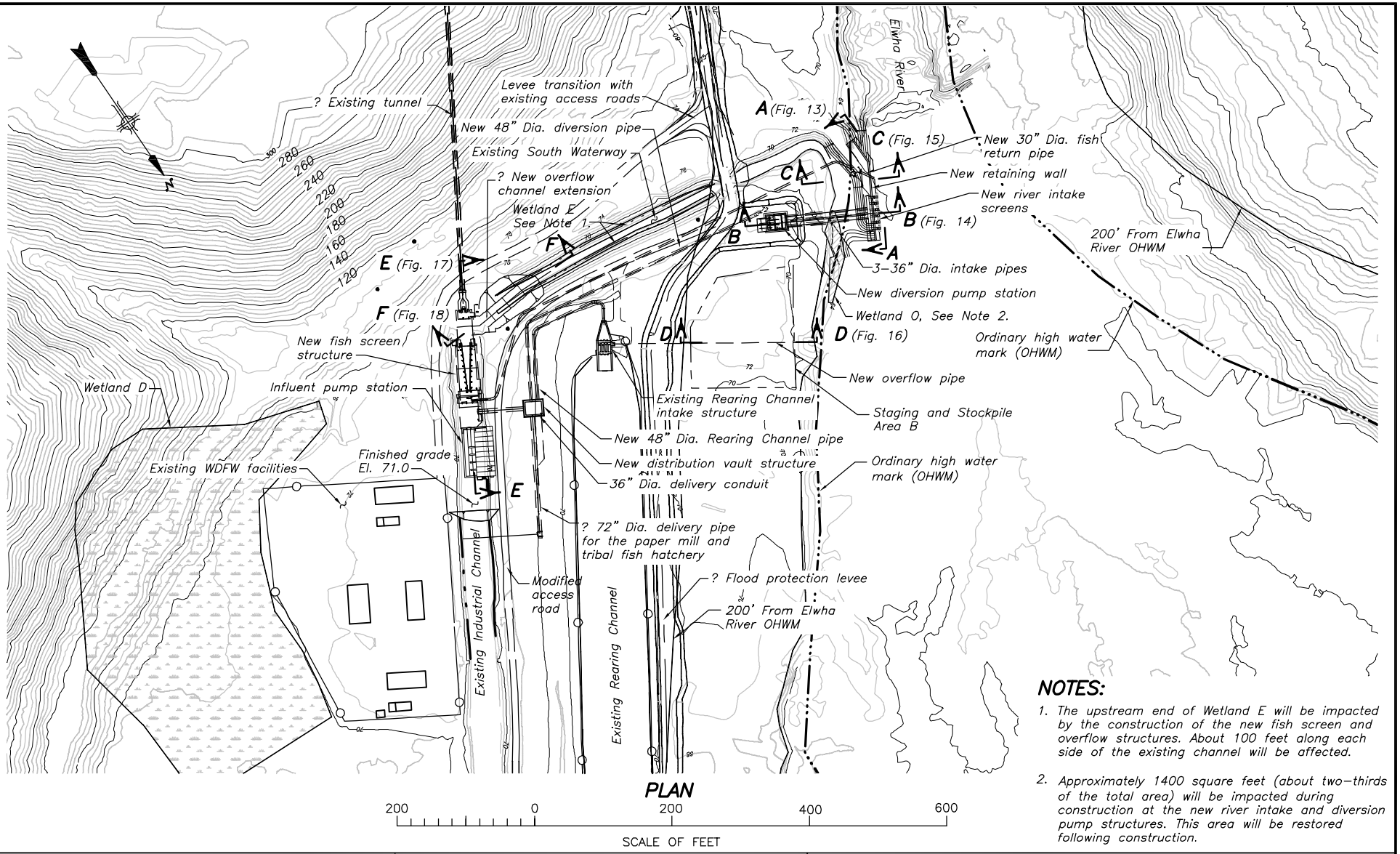

NOTES:

1. The upstream end of Wetland E will be impacted by the construction of the new fish screen and overflow structures. About 100 feet along each side of the existing channel will be affected.
2. Approximately 1400 square feet (about two-thirds of the total area) will be impacted during construction at the new river intake and diversion pump structures. This area will be restored following construction.

Purpose: River Diversion Adjoining Property Owners: See JARPA Application	ELWHA RIVER RESTORATION PROJECT Elwha Surface Water Intake Modified Site Plan Downstream Features	Proposed: Surface Water Intake Construction Reference: 200600334 Near: Port Angeles, WA Application by: National Park Service Figure 12 of 18 Date: 3/31/2006

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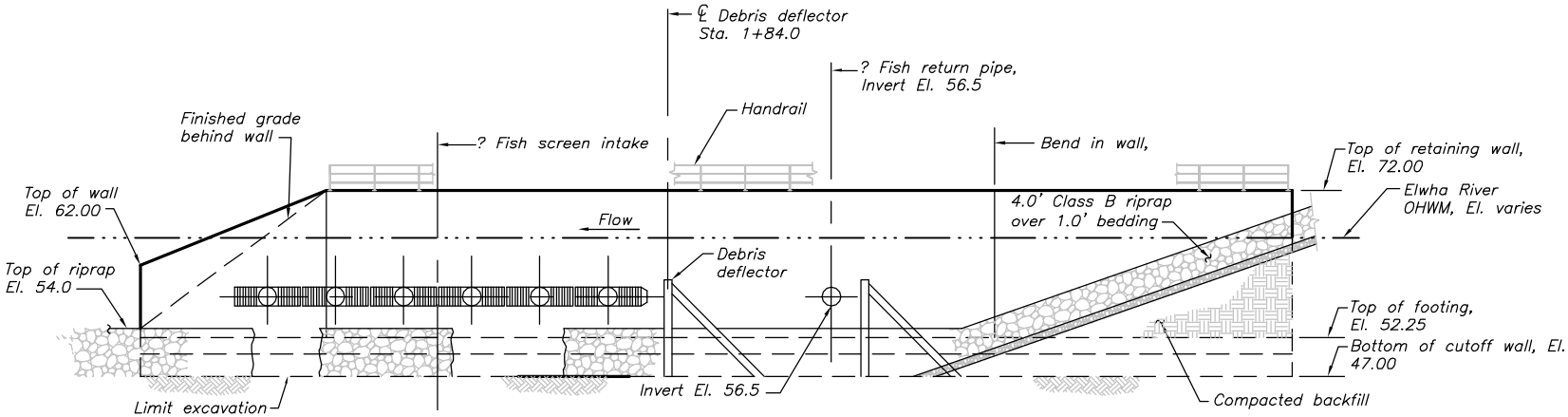
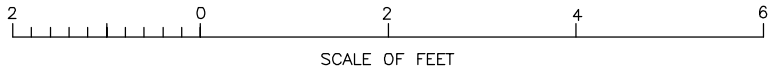


SECTION A–A *(Fig. 12)*

Volume of Material		
Structure	*Material*	*Quantity*
River Intake Retaining Wall	*Excavation*	*2,720 cy.*
	Backfill	*2,995 cy.*
	Riprap	*505 cy.*
	Bedding	*125 cy.*



Purpose: River Diversion

Adjoining Property Owners:
See JARPA Application

ELWHA RIVER RESTORATION PROJECT

Elwha Surface Water Intake

River Intake Structure
Section A

Proposed: Surface Water Intake Construction

Reference: 200600334

Near: Port Angeles, WA

Application by: National Park Service

Figure 13 of 18

Date: 3/31/2006

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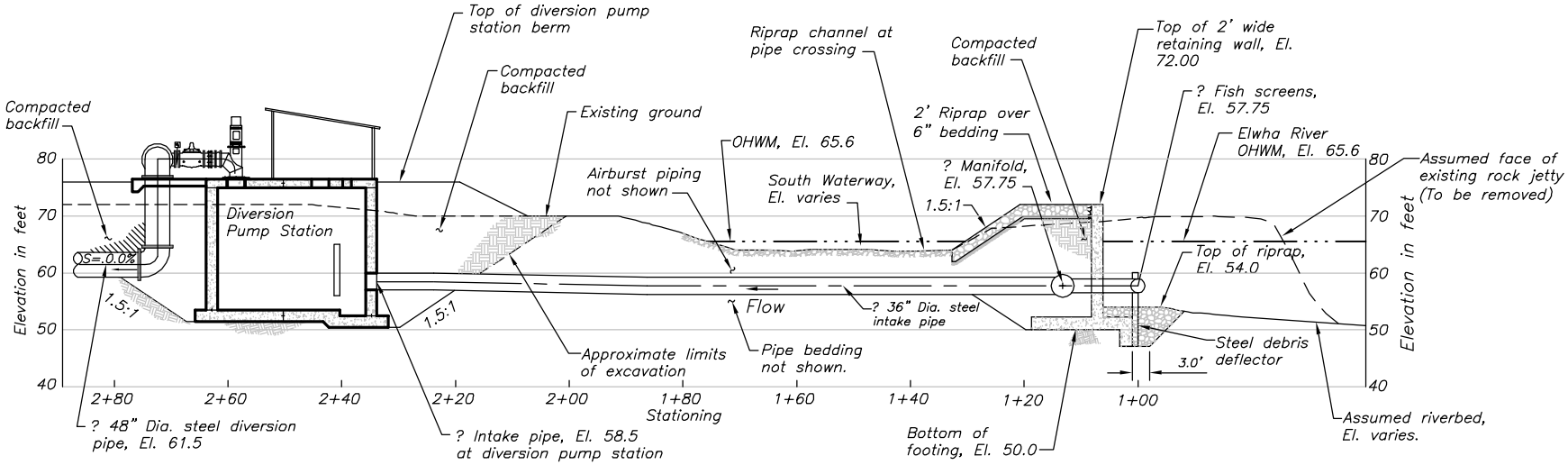
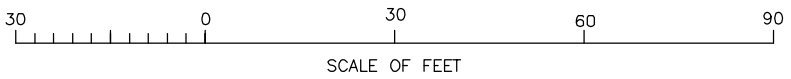


SECTION B–B (Fig. 12)

Volume of Material		
Structure	Material	Quantity
Intake Pipes	Excavation	1,100 cy.
	Backfill	900 cy.
	Bedding	185 cy.
South Waterway	Excavation	90 cy.
	Riprap	90 cy.
Diversion Pump Station	Excavation	3,600 cy.
	Backfill	2,900 cy.



NOTES:

1. See Figure 13 of 18 for Retaining Wall quantities for construction of the River Intake Structure.

Purpose: River Diversion

Adjoining Property Owners:
See JARPA Application

ELWHA RIVER RESTORATION PROJECT

Elwha Surface Water Intake

Diversion Pump Station
Section B

Proposed: Surface Water Intake Construction

Reference: 200600334

Near: Port Angeles, WA

Application by: National Park Service

Figure 14 of 18

Date: 3/31/2006

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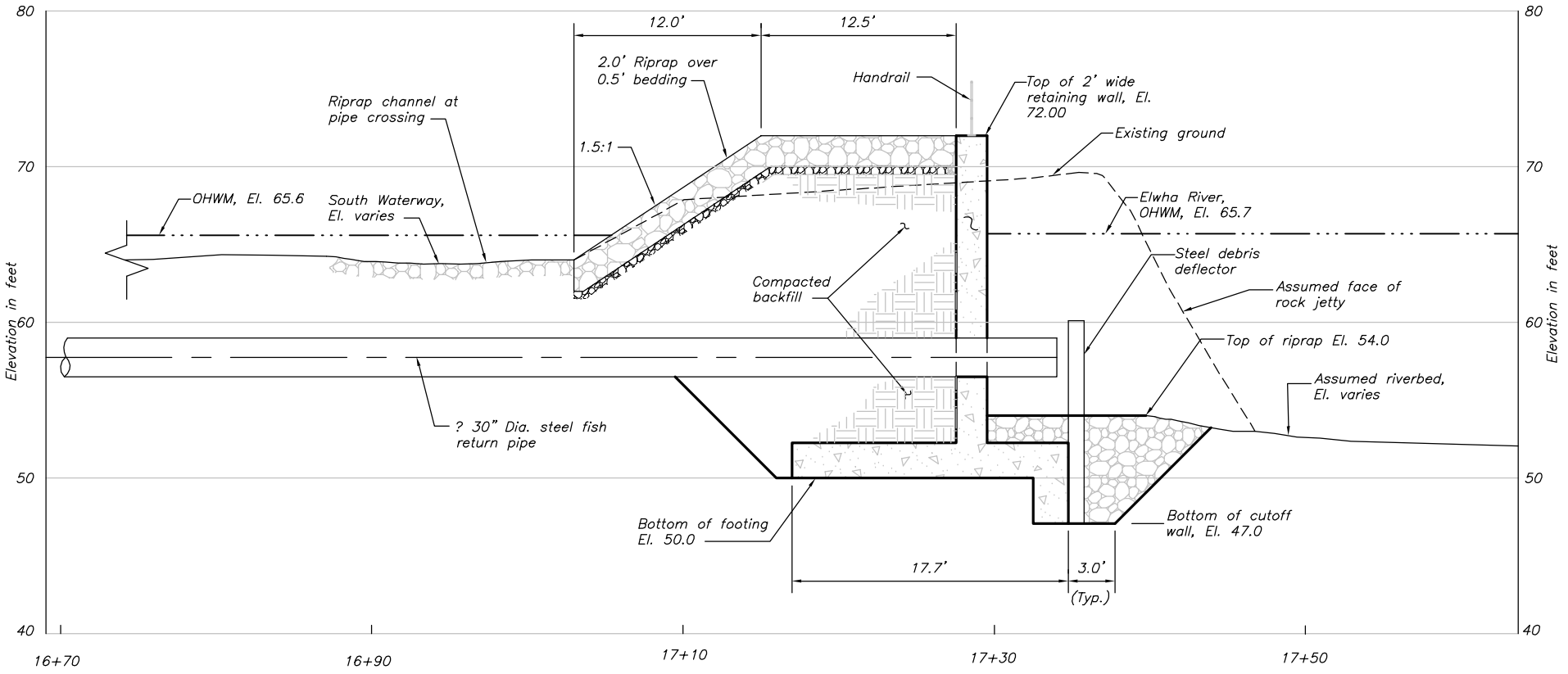

Volume of Material		
Structure	Material	Quantity
Fish Return Pipe	Excavation	7,430 cy.
	Backfill	7,120 cy.
	Bedding	185 cy.
South Waterway	Excavation	19 cy.
	Riprap	19 cy.

SECTION C–C (Fig. 12)

10 0 10 20 30

SCALE OF FEET

NOTES:

1. See Figure 13 of 18 for Retaining Wall quantities for construction of the River Intake Structure.

Purpose: River Diversion Adjoining Property Owners: See JARPA Application	ELWHA RIVER RESTORATION PROJECT Elwha Surface Water Intake Retaining Wall and Fish Return Pipe Section C	Proposed: Surface Water Intake Construction Reference: 200600334 Near: Port Angeles, WA Application by: National Park Service Figure 15 of 18 Date: 3/31/2006

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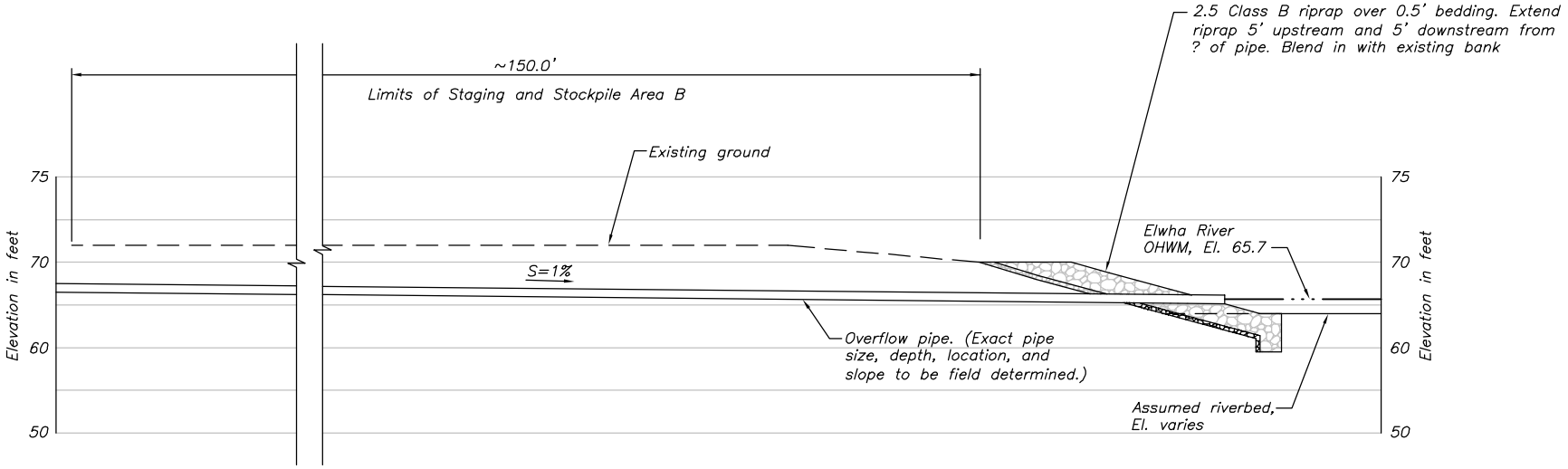
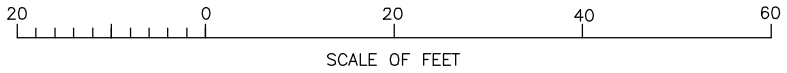


SECTION D–D (Fig. 12)

Volume of Material		
Structure	Material	Quantity
New Overflow Pipe	Excavation	650 cy.
	Backfill	640 cy.
	Riprap	25 cy.
	Bedding	5 cy.



Purpose: River Diversion

Adjoining Property Owners:
See JARPA Application

ELWHA RIVER RESTORATION PROJECT

Elwha Surface Water Intake

New Overflow Pipe From Intake Structure
Section D

Proposed: Surface Water Intake Construction

Reference: 200600334

Near: Port Angeles, WA

Application by: National Park Service

Figure 16 of 18

Date: 3/31/2006

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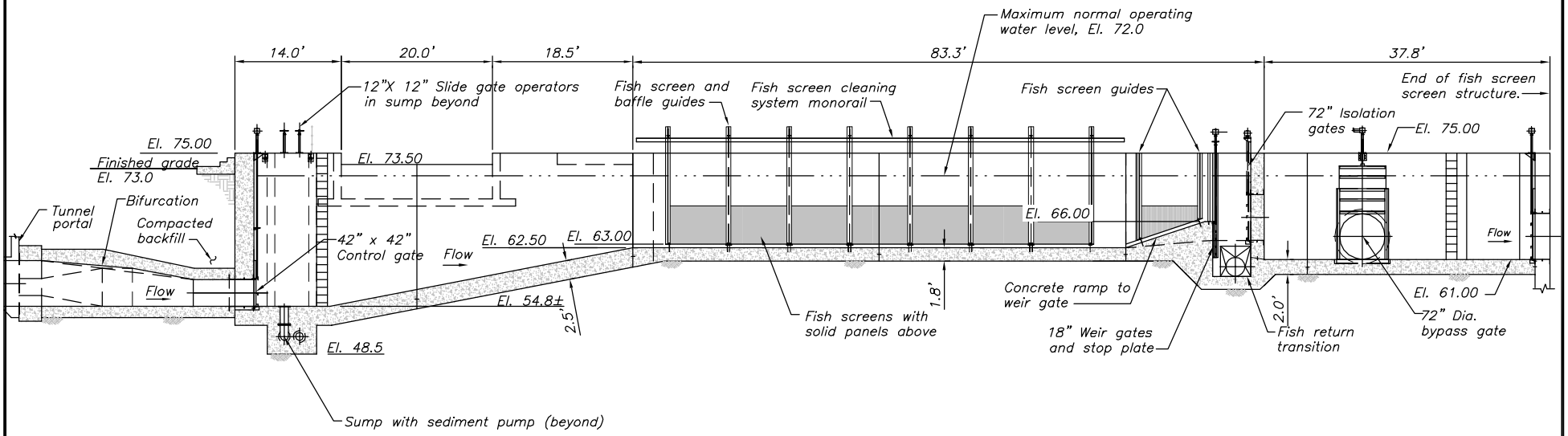

SECTION E–E (Fig. 12)

Volume of Material		
Structure	Material	Quantity
Fish Screen Structure	Excavation	3,420 cy.
	Backfill	4,840 cy.

20 0 20 40 60

SCALE OF FEET

Purpose: River Diversion

Adjoining Property Owners:
See JARPA Application

ELWHA RIVER RESTORATION PROJECT

Elwha Surface Water Intake

Fish Screen Structure
Section E

Proposed: Surface Water Intake Construction

Reference: 200600334

Near: Port Angeles, WA

Application by: National Park Service

Figure 17 of 18

Date: 3/31/2006

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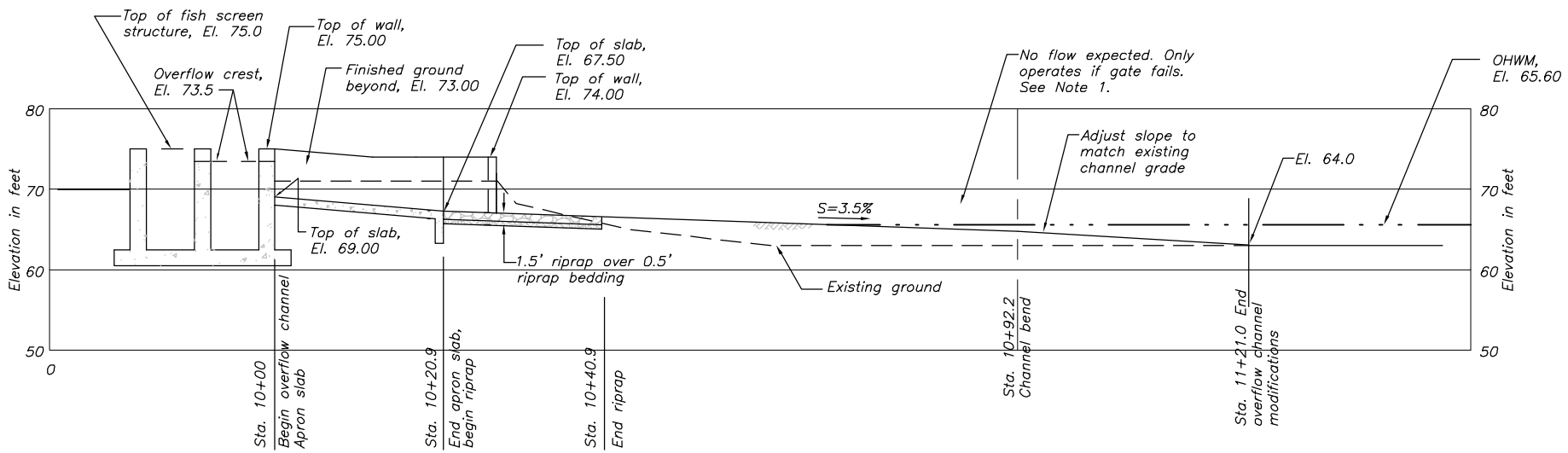
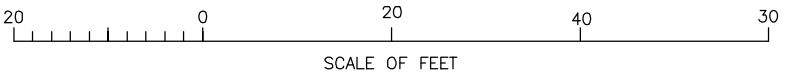


SECTION F–F (Fig. 12)

Volume of Material		
Structure	Material	Quantity
Overflow Channel	Excavation	80 cy.
	Riprap	50 cy.
	Bedding	15 cy.



NOTES:

1. The OHWM (ordinary high water mark) is due to backwater from the Elwha River.

Purpose: River Diversion

Adjoining Property Owners:
See JARPA Application

ELWHA RIVER RESTORATION PROJECT

Elwha Surface Water Intake

Fish Screen Structure
Section F

Proposed: Surface Water Intake Construction

Reference: 200600334

Near: Port Angeles, WA

Application by: National Park Service

Figure 18 of 18

Date: 3/31/2006